

1. Title of the Invention

Electro-optic Device

2. Claims

1. An electro-optic device comprising:
a pair of substrates;
a liquid crystal held between said substrates through a sealing portion;
a color filter located on at least one of said substrates;
and
a transparent electrode formed over said color filter,
wherein an alignment layer of said at least one substrate having said color filter is formed to extend outwardly beyond an area overlapping with the opposed substrate.

2. The electro-optic device of claim 1, wherein a multilayer composed of at least one inorganic layer, or an organic resin layer or inorganic layer and an organic resin layer is formed on the substrate having said color filter, and then said transparent electrode is formed thereon.

3. The electro-optic device of claim 1 or 2 comprising:
a dimming cell having a color filter;
a pair of polarizing members located above and below said dimming cell; and
at least one optically anisotropic substance formed between said dimming cell and polarizing member.

[Advantage of the Invention]

As described above, according to the invention, an alignment layer of a substrate with a color filter is formed to extend outwardly beyond an area overlapping with the opposed substrate, whereby the alignment layer also serves as a transparent electrode protection layer in a signal input section to block an ionic contamination and moisture deposited in forming an electro-optic device, to avoid a galvanic corrosion reaction caused by an effect of an electric field applied when

the device is activated, and to prevent the breaking of the transparent electrode. Therefore, the invention has a great advantage in that it can provide a reliable high-definition electro-optic device easily.

4. Brief Description of the Drawings

Fig. 1 is a sectional view of a substrate with a color filter shown in a first embodiment of the invention.

Fig. 2 is a view showing a structure of an electro-optic device shown in the first embodiment of the invention.

Fig. 3 is a sectional view of a substrate with a color filter shown in a second embodiment of the invention.

Fig. 4 is a view showing a structure of an electro-optic device shown in the second embodiment of the invention.

Fig. 5 is a view showing a structure of an electro-optic device shown in a third embodiment of the invention.

- 1 GLASS SUBSTRATE
- 2 COLOR FILTER
- 3 PROTECTION LAYER
- 4 TRANSPARENT ELECTRODE
- 5 ALIGNMENT LAYER
- 6 GLASS SUBSTRATE
- 7 OPPOSED ELECTRODE
- 8 ALIGNMENT LAYER
- 9 SEAL
- 10 GAP MATERIAL
- 11 LIQUID CRYSTAL
- 12 COLOR FILTER
- 13 PROTECTION LAYER
- 14, 15 POLARIZING MEMBER